

reference to Figure 4, a portion of the column address buffers 34 includes a latch 260 that receives ten column address bits CA0-CA9. The column address buffer 260 latches the address bits responsive to an active low column address strobe read/write command, as is well known in the art. The nine low order address bits CA0-CA8 are applied to the column decoder 56 (Figure 1) in a conventional manner. However, the most significant column address bit CA9 is applied to a pass gate 264. Another pass gate 266 receives the output of a latch 270 that stores the most significant row address bit RA11 responsive to an activate command. The pass gates 264, 266 are controlled by the active low density control signal HD* directly and through an inverter 274. When the HD* signal is inactive high indicative of the full density mode of operation, the pass gate 264 is enabled and the pass gate 266 is disabled so that the latched most significant column address bit CA9 is applied to the column decoder 56 along with the lower order column address bits CA0-CA8. Thus, in the full density mode, the column address buffers 34 operate in a conventional manner. When the HD* signal is active low indicative of the half density mode of operation, the pass gate 264 is disabled and the pass gate 266 is enabled so that the most significant row address bit RA11 is applied by the pass gate 266. As is well known in the art, the row addresses are received prior to the column addresses, and they are latched into the SDRAM 20 responsive to the activate command. In the column address buffers 34 showed in Figure 4, the most significant row address bit RA0 is stored in the latch 270 responsive to the activate command and is then selected by the pass gate 266 for use as the most significant column address bit CA9. In this manner, the most significant row address bit RA11 is remapped to be the most significant column address bit CA9 thereby making the SDRAM 20 with a capacity of $M/2$ rows * N columns plug compatible with SDRAMs adapted to receive row addresses for M rows and column addresses for N/2 columns.

In the Claims:

Please cancel claim 42.